

IN THE CLAIMS

Please amend the claims of the application, without prejudice, as shown below:

Claim 1 (Currently Amended): A method for generating a digital color standard system for the generation or reproduction of standardized colors, comprising:

a) providing a color gamut including a saturation coordinate;
b) dividing the color gamut into a plurality of discrete spectral color values, wherein at least one of the discrete spectral color values includes a plurality of different colors at least including a first color with a first saturation, wherein at least another of the discrete spectral color values includes the first color with a second saturation different than the first saturation, and wherein over at least a part of the color gamut, the discrete spectral color values are substantially equidistant to each other with respect to the color gamut;

c) digitizing the discrete spectral color values; and
d) representing at least one of the digitized discrete spectral color values by means of at least one a reflectance curve specified in regular intervals and wherein over at least a part of the color gamut, the digitized discrete color spectral values are substantially equidistant to each other with respect to the color gamut.

Claim 2 (Canceled).

Claim 3 (Canceled).

Claim 4 (Previously Presented): The method according to claim 1, wherein the discrete spectral color values or the digitized discrete spectral color values are adapted to a color recording capability of a particular color recording process or a particular color recording device.

Claim 5 (Previously Presented): The method according to claim 4, wherein the particular color recording device is one selected from the group consisting of an ink jet printer and a rotary printing press.

Claim 6 (Previously Presented): The method according to claim 1, wherein at least one of the discrete spectral color values and the digitized discrete spectral color values is adapted to a particular recording substrate.

Claim 7 (Previously Presented): The method according to claim 1, wherein at least one of the discrete spectral color values and the digitized discrete spectral color values is adapted to a particular recording material.

Claim 8 (Currently Amended): The method according to claim 7, wherein said particular recording material is one selected from the group consisting of an ink and a toner.

Claim 9 (Previously Presented): The method according to claims 1, wherein particular colors of particular image areas are scanned by means of a spectral measurement device and the particular colors or the spectral color data of the particular colors are assigned to the digitized discrete spectral color values for further processing.

Claim 10 (Previously Presented): The method according to claim 1, wherein at least one of the discrete spectral color values and the digitized discrete spectral color values is set in a relation to pre-defined light conditions.

Claim 11 (Previously Presented): The method according to claim 1, wherein the appearance of at least one of a discrete spectral color value and a digitized discrete spectral color value on a particular recording substrate or recording device is set into a relationship to pre-defined light conditions.

Claim 12 (Canceled).

Claim 13 (Previously Presented): The method according to claim 1, wherein a recording substrate is spectrally measured to provide a recording substrate-specific spectral color data set, and at least one of the discrete spectral color values and the digitized discrete spectral color values is adjusted according to said recording substrate-specific spectral color data set.

Claim 14 (Previously Presented): The method according to claim 1, wherein at least one color of a specimen is spectrally measured and spectral color data is assigned to at least one of a matching discrete spectral color value and a matching digitized discrete spectral color value.

Claim 15 (Previously Presented): The method according to claim 1, wherein the digitized discrete spectral color values are collected to provide a digital color book of at least one chromaticity.

Claim 16 (Previously Presented): The method according to claim 1, further comprising processing the digitized discrete spectral color values, wherein said processing includes at least one of the following processing steps: assigning the digitized discrete spectral color values to color values of images, transmitting at least one digitized discrete spectral color value between remote terminals, and printing out at least one digitized discrete spectral color value.

Claim 17 (Currently Amended): The method according to claim 1, further comprising using a data carrier to carry at least one of said the digitized discrete spectral color values.

Claim 18 (Currently Amended): A computer system for generating a digital color standard system for the generation or reproduction of standardized colors, comprising a processor that is programmed to a) divide a color gamut having a saturation coordinate into a plurality of discrete spectral color values, wherein at least one of the discrete spectral color values includes a plurality of different colors at least including a first color with a first saturation, wherein at least another of the discrete spectral color values includes the first color with a second saturation different than the first saturation, and wherein over at least a part of the color gamut, the discrete spectral color values are substantially equidistant to each other with respect to the color gamut, b) digitize the discrete spectral color values, wherein at least one of the digitized discrete spectral color values are ~~is~~ representable by means of at least one a reflectance curve specified in regular intervals and wherein over at least a part of the color gamut, the digitized discrete spectral color values are substantially equidistant to each other with respect to the color gamut; and c) process the digitized discrete spectral color values.

Claim 19 (Currently Amended): The computer system according to claim 18, wherein said the digitized discrete spectral color values are stored in memory associated with the processor and are accessible through a data network.

Claim 20 (Currently Amended): The computer system according to claim 18, wherein said the digitized discrete spectral color values are stored in memory associated with the processor in the form of at least one digital color swatch.

Claim 21 (Original): The computer system according to claim 18, wherein color recording characteristics data of a plurality of recording substrates are stored in the memory associated with said processor and are accessible through a data network.

Claim 22 (Original): The computer system according to claim 18, wherein the processor can be accessed in order to combine a standard digital color swatch book or digital standard color data with color recording substrate characteristics, to generate color reproduction simulation data.

Claim 23 (Original): The computer system according to claim 18, wherein color reproduction characteristics data for a plurality of color materials are stored in memory associated with the processor to be accessed through a data network in order to retrieve data.

Claim 24 (Currently Amended): The computer system according to claim 23, wherein said plurality of color materials are selected from the group consisting of an ink and a toner.

Claim 25 (Previously Presented): The computer system according to claim 18, wherein at least two of the following kinds of data can be accessed or combined by the processor: digital standard color swatch book data or digital standard color data; color recording characteristics data for recording substrates; color reproduction characteristics data for color materials; and color appearance characteristics data for color reproducing processes; in order to achieve particular color reproduction simulation data.

Claim 26 (Previously Presented): The computer system according to claim 25, wherein said color reproducing processes include at least one selected from the group consisting of printing processes, electro-photographical color copying processes, and screens.

Claim 27 (Original): The computer system according to claim 18, wherein color reproduction simulation data can be browsed by a remote terminal.

Claim 28 (Previously Presented): The computer system according to claim 18, wherein color recording characteristics data for recording substrates, color reproduction characteristics data for color materials, or color appearance characteristics data for color reproducing processes can be transmitted to a data carrier or device to be stored, in order to be accessible or combinable by remote terminals, to achieve particular color reproduction simulation data.

Claim 29 (Currently Amended): A data carrier system, comprising:

a computer readable medium configured for the storage of color data thereon, and on which computer readable medium is stored color data, the color data being one selected from the group consisting of color recording characteristics data for recording substrates, color reproduction characteristics data for color materials, color appearance characteristics data for color reproducing processes, and combinations thereof, wherein the color data is generated by: a) providing a color gamut including a saturation coordinate, b) dividing the color gamut into a plurality of discrete spectral color values, wherein at least one of the discrete spectral color values includes a plurality of different colors at least including a first color with a first saturation, wherein at least another of the discrete spectral color values includes the first color with a second saturation different than the first saturation, and wherein over at least a part of the color gamut, the discrete spectral color values are substantially equidistant to each other with respect to the color gamut, and c) digitizing the discrete spectral color values, wherein at least one of the digitized discrete spectral color values are is representable by means of at least one a reflectance curve specified in regular intervals and wherein over at least a part of the color gamut, the digitized discrete spectral color values are equidistant to each other with respect to the color gamut.

Claim 30 (Currently Amended): A ~~The~~ data carrier system in accordance with according to claim 29, wherein the computer readable medium is one selected from the group consisting of a CD-ROM, a DVD-carrier, and a computer server.

Claim 31 (Currently Amended): A ~~The~~ data carrier system in accordance with according to claim 29, wherein the color data is further generated by: d) representing the at least one of the digitized discrete spectral color values by means of at least one a reflectance curve specified in regular intervals, wherein ~~over at least a part of the color gamut, the digitized discrete color spectral values are equidistant to each other with respect to the color gamut.~~

Claim 32 (Currently Amended): A ~~The~~ data carrier system in accordance with according to claim 29, wherein the digitized discrete spectral color values are processable by a computer configured to read out the color data from the computer readable medium to generate or reproduce standardized colors.

Claim 33 (Canceled).

Claim 34 (Currently Amended): A ~~The~~ method for generating a digital color standard system for the generation or reproduction of standardized colors in accordance with according to claim 1, further comprising processing the digitized discrete color spectral color values.

Claim 35 (Currently Amended): A ~~The~~ computer system in accordance with according to claim 18, wherein the processor is further programmed to provide the color gamut.

Claim 36 (Canceled).

Claim 37 (New): The method according to claim 1, wherein the at least another of the discrete spectral color values includes the plurality of colors associated with the at least one of the discrete spectral color values.

Claim 38 (New): The method according to claim 1, wherein the at least one of the discrete spectral color values manifests a first closed loop through the color gamut including all of the colors of the color gamut, each with the first saturation.

Claim 39 (New): The method according to claim 38, wherein the at least another of the discrete spectral color values manifests a second closed loop through the color gamut including all of the colors of the color gamut, each with the second saturation.

Claim 40 (New): The method according to claim 1, wherein the first color falls within the at least a part of the color gamut.

Claim 41 (New): The computer system according to claim 18, wherein the at least another of the discrete spectral color values includes the plurality of colors associated with the at least one of the discrete spectral color values.

Claim 42 (New): The computer system according to claim 18, wherein the at least one of the discrete spectral color values manifests a first closed loop through the color gamut including all of the colors of the color gamut, each with the first saturation.

Claim 43 (New): The computer system according to claim 42, wherein the at least another of the discrete spectral color values manifests a second closed loop through the color gamut including all of the colors of the color gamut, each with the second saturation.

Claim 44 (New): The computer system according to claim 18, wherein the first color falls within the at least a part of the color gamut.

Claim 45 (New): The data carrier system according to claim 29, wherein the at least another of the discrete spectral color values includes the plurality of colors associated with the at least one of the discrete spectral color values.

Claim 46 (New): The data carrier system according to claim 29, wherein the at least one of the discrete spectral color values manifests a first closed loop through the color gamut including all of the colors of the color gamut, each with the first saturation.

Claim 47 (New): The data carrier system according to claim 46, wherein the at least another of the discrete spectral color values manifests a second closed loop through the color gamut including all of the colors of the color gamut, each with the second saturation.

Claim 48 (New): The data carrier system according to claim 29, wherein the first color falls within the at least a part of the color gamut.

The following is a listing of the pending claims of the application, as amended according to the above-presented Amendment to the Claims:

Claim 1: A method for generating a digital color standard system for the generation or reproduction of standardized colors, comprising:

- a) providing a color gamut including a saturation coordinate;
- b) dividing the color gamut into a plurality of discrete spectral color values, wherein at least one of the discrete spectral color values includes a plurality of different colors at least including a first color with a first saturation, wherein at least another of the discrete spectral color values includes the first color with a second saturation different than the first saturation, and wherein over at least a part of the color gamut, the discrete spectral color values are substantially equidistant to each other with respect to the color gamut;
- c) digitizing the discrete spectral color values; and
- d) representing at least one of the digitized discrete spectral color values by means of a reflectance curve specified in regular intervals.

Claim 4: The method according to claim 1, wherein the discrete spectral color values of the plurality thereof or the digitized discrete spectral color values of the corresponding plurality thereof are adapted to a color recording capability of a particular color recording process or a particular color recording device.

Claim 5: The method according to claim 4, wherein the particular color recording device is one selected from the group consisting of an ink jet printer and a rotary printing press.

Claim 6: The method according to claim 1, wherein at least one of the discrete spectral color values of the plurality thereof and the digitized discrete spectral color values of the corresponding plurality thereof is adapted to a particular recording substrate.

Claim 7: The method according to claim 1, wherein at least one of the discrete spectral color values of the plurality thereof and the digitized discrete spectral color values of the corresponding plurality thereof is adapted to a particular recording material.

Claim 8: The method according to claim 7, wherein said particular recording material is one selected from the group consisting of an ink and a toner.

Claim 9: The method according to claims 1, wherein particular colors of particular image areas are scanned by means of a spectral measurement device and the particular colors or the spectral color data of the particular colors are assigned to the digitized discrete spectral color values of the corresponding plurality thereof for further processing.

Claim 10: The method according to claim 1, wherein at least one of the discrete spectral color values and the digitized discrete spectral color values of the corresponding plurality thereof is set in a relation to pre-defined light conditions.

Claim 11: The method according to claim 1, wherein the appearance of at least one of a discrete spectral color value of the plurality thereof and a digitized discrete spectral color value of the corresponding plurality thereof on a particular recording substrate or recording device is set into a relationship to pre-defined light conditions.

Claim 13: The method according to claim 1, wherein a recording substrate is spectrally measured to provide a recording substrate-specific spectral color data set, and at least one of the discrete spectral color values of the plurality thereof and the digitized discrete spectral color values of the corresponding plurality thereof is adjusted according to said recording substrate-specific spectral color data set.

Claim 14: The method according to claim 1, wherein at least one color of a specimen is spectrally measured and spectral color data is assigned to at least one of a matching discrete spectral color value of the plurality thereof and a matching digitized discrete spectral color value of the corresponding plurality thereof.

Claim 15: The method according to claim 1, wherein the digitized discrete spectral color values of the plurality thereof are collected to provide a digital color book of at least one chromaticity.

Claim 16: The method according to claim 1, further comprising processing the digitized discrete spectral color values of the corresponding plurality thereof, wherein said processing includes at least one of the following processing steps: assigning the digitized discrete spectral color values of the corresponding plurality thereof to color values of images, transmitting at least one digitized discrete spectral color value of the corresponding plurality thereof between remote terminals, and printing out at least one digitized discrete spectral color value of the corresponding plurality thereof.

Claim 17: The method according to claim 1, further comprising using a data carrier to carry at least one of the digitized discrete spectral color values of the corresponding plurality thereof.

Claim 18: A computer system for generating a digital color standard system for the generation or reproduction of standardized colors, comprising a processor that is programmed to a) divide a color gamut having a saturation coordinate into a plurality of discrete spectral color values, wherein at least one of the discrete spectral color values includes a plurality of different colors at least including a first color with a first saturation, wherein at least another of the discrete spectral color values includes the first color with a second saturation different than the first saturation, and wherein over at least a part of the color gamut, the discrete spectral color values are substantially equidistant to each other with respect to the color gamut, b) digitize the discrete spectral color values, wherein at least one of the digitized discrete spectral color values is representable by means of a reflectance curve specified in regular intervals; and c) process the digitized discrete spectral color values.

Claim 19: The computer system according to claim 18, wherein the digitized discrete spectral color values are stored in memory associated with the processor and are accessible through a data network.

Claim 20: The computer system according to claim 18, wherein the digitized discrete spectral color values are stored in memory associated with the processor in the form of at least one digital color swatch.

Claim 21: The computer system according to claim 18, wherein color recording characteristics data of a plurality of recording substrates are stored in the memory associated with said processor and are accessible through a data network.

Claim 22: The computer system according to claim 18, wherein the processor can be accessed in order to combine a standard digital color swatch book or digital standard color data with color recording substrate characteristics, to generate color reproduction simulation data.

Claim 23: The computer system according to claim 18, wherein color reproduction characteristics data for a plurality of color materials are stored in memory associated with the processor to be accessed through a data network in order to retrieve data.

Claim 24: The computer system according to claim 23, wherein said plurality of color materials are selected from the group consisting of an ink and a toner.

Claim 25: The computer system according to claim 18, wherein at least two of the following kinds of data can be accessed or combined by the processor: digital standard color swatch book data or digital standard color data; color recording characteristics data for recording substrates; color reproduction characteristics data for color materials; and color appearance characteristics data for color reproducing processes; in order to achieve particular color reproduction simulation data.

Claim 26: The computer system according to claim 25, wherein said color reproducing processes include at least one selected from the group consisting of printing processes, electro-photographical color copying processes, and screens.

Claim 27: The computer system according to claim 18, wherein color reproduction simulation data can be browsed by a remote terminal.

Claim 28: The computer system according to claim 18, wherein color recording characteristics data for recording substrates, color reproduction characteristics data for color materials, or color appearance characteristics data for color reproducing processes can be transmitted to a data carrier or device to be stored, in order to be accessible or combinable by remote terminals, to achieve particular color reproduction simulation data.

Claim 29: A data carrier system, comprising:

a computer readable medium configured for the storage of color data thereon, and on which computer readable medium is stored color data, the color data being one selected from the group consisting of color recording characteristics data for recording substrates, color reproduction characteristics data for color materials, color appearance characteristics data for color reproducing processes, and combinations thereof, wherein the color data is generated by: a) providing a color gamut including a saturation coordinate, b) dividing the color gamut into a plurality of discrete spectral color values, wherein at least one of the discrete spectral color values includes a plurality of different colors at least including a first color with a first saturation, wherein at least another of the discrete spectral color values includes the first color with a second saturation different than the first saturation, and wherein over at least a part of the color gamut, the discrete spectral color values are substantially equidistant to each other with respect to the color gamut, and c) digitizing the discrete spectral color values, wherein at least one of the digitized discrete spectral color values is representable by means of a reflectance curve specified in regular intervals.

Claim 30: The data carrier system according to claim 29, wherein the computer readable medium is one selected from the group consisting of a CD-ROM, a DVD-carrier, and a computer server.

Claim 31: The data carrier system according to claim 29, wherein the color data is further generated by: d) representing the at least one of the digitized discrete spectral color values by means of a reflectance curve specified in regular intervals.

Claim 32: The data carrier system according to claim 29, wherein the digitized discrete spectral color values of the corresponding plurality thereof are processable by a computer configured to read out the color data from the computer readable medium to generate or reproduce standardized colors.

Claim 34: The method according to claim 1, further comprising processing the digitized discrete spectral color values of the corresponding plurality thereof.

Claim 35: The computer system according to claim 18, wherein the processor is further programmed to provide the color gamut.

Claim 37: The method according to claim 1, wherein the at least another of the discrete spectral color values includes the plurality of colors associated with the at least one of the discrete spectral color values.

Claim 38: The method according to claim 1, wherein the at least one of the discrete spectral color values manifests a first closed loop through the color gamut including all of the colors of the color gamut, each with the first saturation.

Claim 39: The method according to claim 38, wherein the at least another of the discrete spectral color values manifests a second closed loop through the color gamut including all of the colors of the color gamut, each with the second saturation.

Claim 40: The method according to claim 1, wherein the first color falls within the at least a part of the color gamut.

Claim 41: The computer system according to claim 18, wherein the at least another of the discrete spectral color values includes the plurality of colors associated with the at least one of the discrete spectral color values.

Claim 42: The computer system according to claim 18, wherein the at least one of the discrete spectral color values manifests a first closed loop through the color gamut including all of the colors of the color gamut, each with the first saturation.

Claim 43: The computer system according to claim 42, wherein the at least another of the discrete spectral color values manifests a second closed loop through the color gamut including all of the colors of the color gamut, each with the second saturation.

Claim 44: The computer system according to claim 18, wherein the first color falls within the at least a part of the color gamut.

Claim 45: The data carrier system according to claim 29, wherein the at least another of the discrete spectral color values includes the plurality of colors associated with the at least one of the discrete spectral color values.

Claim 46: The data carrier system according to claim 29, wherein the at least one of the discrete spectral color values manifests a first closed loop through the color gamut including all of the colors of the color gamut, each with the first saturation.

Claim 47: The data carrier system according to claim 46, wherein the at least another of the discrete spectral color values manifests a second closed loop through the color gamut including all of the colors of the color gamut, each with the second saturation.

Claim 48: The data carrier system according to claim 29, wherein the first color falls within the at least a part of the color gamut.